With Dr Ramsden Compliments

ANNUAL REPORT

ON THE

Health of the Urban District

OF

SADDLEWORTH,

FOR THE YEAR

1913,

BY

HERBERT RAMSDEN, M.D. (Lond.)

M.B., B.S. (Vict.), M.R.C.S., L.R.C.P., L.S.A.,

DIPLOMATE IN PUBLIC HEALTH,

Medical Officer of Health.

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Mr. LEONARD TAYLOR, A.R.SAN.I.

SUNNYSIDE,
DOBCROSS,
JANUARY, 1914.

To the District Council of the Urban Sanitary District of Saddleworth.

GENTLEMEN,

I have again pleasure in submitting to you my Annual Report.

The Urban Sanitary District of Saddleworth, with a large and sparsely-populated area of 16,930 acres, is situated on the skirts of the Pennine Range, and includes in this area a large acreage of unenclosed moorland.

The district is a very hilly one; the highest one being 1774 feet, at Black Chew Head. These hills, covered as they are by extensive moors, form the gathering grounds for much water, which, running down the various valleys, forms the River Tame. This river arises near Denshaw, and runs in an S curve from north to south to Greenfield, receiving on its way, on its left side, brooks from the Castleshaw, Diggle, Pickhill, and Greenfield Valleys, in order. The Greenfield Brook receives as it descends from Bill's o' Jacks a large stream, the Chew Brook, on its left. The minimum elevation above sea level is near Greenfield, and is about 500 feet.

The district lies chiefly on the Millstone Grit; a variety (the Kinder Scout Grit) comprises most of the hills from Standedge through Diggle to Mossley. Near Grains Bar, there is a seam of poor coal, and shales are common in the hills bordering on the Castleshaw and Denshaw Valleys. The soil is as a rule porous, though clay is not wanting in the lower levels of the district.

Scattered at intervals of about a mile are the various villages, which make up the greater part of the population of the district; each village is a centre of manufacture, whilst on the hillsides farming is carried on, much milk being consumed in Oldham. The chief manufactures are those of woollen goods, though there are two cotton mills and a large ironworks, in addition to several printing and bleaching works.

The population in 1891 was 12,319, whilst the last census (1911) shows it to be 12,603, an increase of only 284.

The preponderence of the number of females over males was 543, their being 6,030 males, and 6,573 females.

The population in the various Wards according to the last census was—

Delph	3586
Dobcross	3015
Uppermill	2170
Greenfield	3832

There were 3,027 occupied houses in the district, giving an average number of 4·16 persons per house, compared with 4·4 in the previous census. The uninhabited houses were 211 in number, as compared with 397 in the 1901 census. The population for 1913 is estimated as 12,660.

RATES.

During the past year, the rates were 6/1 in the £, including a District Rate of 2/9 and a Poor Rate of 3/4 in the £; the former rate includes Lighting, Sanitary, and Special Sanitary Rates.

The gross estimated Rental was £103,137. The rateable value of agricultural land was £5,382, and of buildings, etc., £74,340.

WATER SUPPLY.

Saddleworth is so extremely well supplied with water that the neighbouring towns have constructed large reservoirs in the various valleys. The Oldham Corporation has reservoirs at Castleshaw, Dowry, New Year's Bridge, Crook Gate, and Readycon Dean. The Ashton, Stalybridge and Dukinfield (District) Joint Committee have constructed two reservoirs in the Greenfield Valley, and a third one in the Chew Valley, which, however, is only intended for compensation water. In the Diggle valley are reservoirs which feed the Huddersfield Canal.

It is chiefly from these reserves in the Greenfield Valley that Saddleworth is supplied with water, although the Oldham Corporation snpplies a few houses at Denshaw. The remaining houses, chiefly those scattered on the hill-side, use the water from neighbouring wells, which are for the most part unsafe. It was from this fact that I strongly advisea the houses in the Grasscroft district to use the public supply. This advice has, however, been acted upon in a few instances only.

The water from the Yeoman Hey and Greenfield reservoirs is naturally plumbo-solvent, and some years ago was also so full of peaty material that we were obliged to seek power to compel the Ashton, Stalybridge & Dukinfield (District) Joint Committee not only to remove its power for dissolving lead, but also to filter the water. After careful experiments, made during 1909, 1910, and 1911, they decided to instal Pressure Filters (Mather & Platt's) to the whole of the water coming from the two Greenfield reservoirs. This installation was laid down near Ashway Gap, and was brought into force on September 19th, 1912, and has proved most effective in every respect.

The treatment is, shortly, as follows: Firstly, the raw water is mixed with the necessary amount of chemicals (alumino-ferric and chalk) by a special device whereby they are fed into the water at such a rate as to preserve a fixed ratio to the rate of flow, and then this water passes directly on to the Pressure Filters, where it is filtered through quartz sand, which removes the suspended matter. The chemicals used have the power of removing the colour, making the water alkaline, and of adding a certain amount of hardness, so as to make it no longer capable of dissolving lead.

As an indication of the efficiency of this line of treatment, I give the following figures by the courtesy of Mr. Fred J. Dixon, F.G.S., A.M.Inst.C.E.; these are the average figures of five analyses made during 1912:

	Reaction.	No. of bacteria per cubic centimeters.	Hardness.		Plumbo-solvent action.*
			Temporary	Permanent	
YEOMAN HEY:					
(*a*) Raw water	Alkaline.	10	2·3	3·4	0·112
(*b*) Filtered water	Alkaline.	4	2·7	3·6	0·008
GREENFIELD:					
(*a*) Raw water	Acid.	64	0·1	3·6	0·900
(*b*) Filtered water	Alkaline.	2	1·7	3·9	0·024

* These are expressed in parts per 100,000.

Of 19 samples of water analysed by the County Analyst, 2 only were found to contain slight quantities of lead or the amount of 0·143 and 0·035 parts in 100,000.

The supply of water is a continuous one. As it is now a thoroughly good water, it should be extended, if possible, to all houses that are supplied by wells where the water becomes muddy in rainy weather or is liable to become deficient in quantity after a slight drought.

RIVERS AND STREAMS.

As a rule, the pollution of the streams by manufacturing effluents is strictly watched and prevented. The method of treatment is generally that of Alumino-ferric, with subsequent filtration through sand.

SEWERAGE SYSTEM.

The laying down of Sewers and the erection of Sewerage Works was completed and brought into action on December 31st, 1896. There are 4 separate drainage schemes in operation.

These are—

1. The Delph, Denshaw, Dobcross, and Diggle Scheme, in which the main sewer is laid from Denshaw to Brownhill, passing through Slackcote, Linfitts, Delph, and Tamewater. It receives branches from New Delph (up to Lower Stones), Midgrove, Dobcross, and Diggle (up to Sam Lane), and discharges its sewage at the Outfall Works near Brownhill Bridge.

2. The Royal George and Grasscroft Scheme, in which sewers have been laid from near Greenfield Station to Royal George, and which receives branches from Shawhall and Grasscroft. The Sewage Works are near the River Tame close to Wright Mill.

3. The Greenfield and Friezland Scheme, in which sewers are laid from near Greenfield Station to Waterside, receiving branches from Horsforth, Ladhill, and Wellington Terrace. The Outfall Works are near the River Tame, and close to the Wellington Mills.

4. The Uppermill Scheme, in which sewers are laid along the principal streets of Uppermill. These are joined by branches from Saddleworth Fold and Shaws, and discharge their contents into the Outfall Works near the River Tame, at Halls.

I would again call your attention to the condition of Diglee and Harrop Green, which require sewering. As a scheme is already under consideration to put down sewers from Shaw Lea, Diggle, it should not be a difficult matter to extend it to include Diglee and Harrop Green. Sewers have now been laid to Shaws, near Uppermill, connecting up the new Council houses that have just been erected.

TREATMENT OF SEWAGE.

This varies at the different outfall works of the various schemes.

At the works at Wright Mill, which receives the sewage of the district drained by the Royal George Scheme, it is first passed into septic tanks, of which there are two; from these, it passes on to bacteria beds, where it is allowed to stay for six hours, and is then run on to another bacteria bed, where it stays a similar time. The effluent is afterwards allowed to pass into the river, as it is then found to be good. There are four bacteria beds, only two being used at a time, and these only during six hours out of the twenty-four, so that each one receives eighteen hours' rest. During the night and on Sundays, the effluent from the septic tanks passes through a large filter bed made of coke, and thence into the stream.

In the Outfall Works supplied by the Delph, Denshaw, Dobcross, and Diggle, Scheme, the Bacterial System is in force. The enlargement of the works has been completed, and there is now equipment to deal with the whole of the sewage. After a preliminary screening, the crude sewage is allowed to remain in a large septic tank for 24 hours; it is then conveyed by open channels to four large filtering beds, on which it is sprayed by means of pivoted and perforated arms, which the pressure of the effluent jets causes to revolve. The feeding of the beds is done intermittenly, three minutes' spraying being followed by a rest of three minutes. In this way, the aeration of the bacterial beds (which are composed of coke) is effected. Occasionally a bed is allowed a complete rest for 24 hours. The effluent from the beds is then, after being led into a tank, permitted to flow into the river after passing through a weir to permit the removal of the scum. The effluent resulting from this treatment has been repeatedly proved to be very satisfactory in every way.

In the Outfall Works in the Uppermill and Greenfield Schemes, Polarite is used. This is sufficiently satisfactory in the latter, but there is still need for attention to the Uppermill Works. Both these works should be converted into the Bacterial Method of treatment.

I cannot but think you would be well advised if you were to connect the Uppermill, Greenfield, and Royal George Systems together. and let the sewage be treated at the Outfall Works, situated at Royal George. This should, of course, be on the Bacterial System, and it would have the advantage of doing away with two of the Outfall Works and would probably prove to be economical.

Complaint is still occasionally made about the foul emanations arising from the sewer gratings, and I am glad (where the smell is objectionable) they are being replaced by special ventilation shafts.

TIPS.

The system of tips to receive night-soil, ashes, and garbage, is the one in vogue. This will very speedily be impossible, as the existing tips are nearly full, and indeed there is difficulty even now in keeping them at all sanitary, partly on account of the alleged necessity for forming lagoons. One way of dealing with this difficulty (in a partial way) would be the more general employment of the water-carriage system instead of the sanitary pail.

As the council houses near Dobcross have been constructed in the vicinity of a large "tip," it would be better and certainly less unsightly if the latter were abolished.

CLOSET ACCOMMODATION.

This is largely met by the use of the sanitary pail and the water-carriage system. The difficulty in providing necessary tips to deal with the sanitary pail is so great, that it would be wiser to insist as much as possible on carriage by water, so that the materials could be treated at the Sewage Works.

There are still instances where greater closet accommodation is required ; groups of cottages and mills being, of course, the chief offenders.

It is much to be regretted that the charging for water in this type is seriously militating against the adoption of water-closets. People seem to prefer any risk or unpleasantness rather than incur the small extra expense that their adoption would entail.

The estimated number of Privies is about 600, and of Pail Closets, 1,050. The number of Water-closets is 365, and of waste-water closets, 400. Twenty-five privies were re-constructed as W.C.'s or Pail Closets.

DESTRUCTOR.

The question of a Destructor is forced upon our consideration by the inadequate provision of Tips. It is quite certain that something definite will have to be done in this matter: if we cannot provide more tips, then a Destructor becomes a necessity.

The burial or removal of butcher's offal and the destruction of garbage is necessary if we are to keep down foul emanations and not provide breeding grounds for flies and vermin, which will, in turn, be a standing menace to our health. If, as I am informed, the butcher can sell the offal and gain profit thereby, it becomes difficult to see why this sale should not be made compulsory.

SCAVENGING.

You are to be congratulated on having made a serious attempt to cope with this question. Seeing, however, that your arrangements do not deal with the whole of the houses within even convenient distances, it would be better to revise your system and undertake the whole of the Scavenging within, at all events reasonable areas, by means of your own staff and horses.

At present, where the houses are conveniently situated, the owner may contract to have the refuse removed for 5/- per annum, or 3/6 for ashpits only. In Uppermill there is a uniform charge of 5/- per annum per house.

It is true that the night-soil is collected at night, but the shaking about it receives, on account of its being removed in springless tumbler carts, is undoubtedly a nuisance, and should be rectified at once.

PRIVATE ROADS.

I have from time to time alluded to the dangerous condition of the private road between Diggle Station and Harrop Court. In my last Report I said:

> "Although a private road, it is one very largely used by the general public. In wet weather it is almost untraversable, and in all weathers it is dangerous, more particularly at one corner near the now disused Mitchell Mill. One of the parties responsible for its condition has, from time to time, done something to better its surface, but this is next to useless, if the more dangerous and boggy portion near Mitchell Mill is not attended to. Public petitions have been "got up," and innumerable letters been written, but no real attempt to deal with the question has been obtained. It would be well worth your consideration to consider the question of making the road public, for as it stands it is a disgrace and danger to the district."

I have nothing further to say to this, except that it is still more dangerous and is in very urgent need of attention. I would indeed suggest an appeal to the County Council or L.G.B., if you, gentlemen, have no power to remedy the matter.

AMBULANCE VAN.

We have now, through the public-spirited action of a few people, an Ambulance Van. This would prove still more valuable if a fund could be created to help to defray the rather heavy expense incidental to its use.

SANITARY INSPECTIONS.

Although I have no definite list of the number of my inspections, yet I have made, and do make, constant inspections of houses, and particularly so, when the house has been visited by an infectious disease. The Nuisance Inspector's Report is given later.

SCHOOLS.

The number of public Elementary Schools are as follows: Denshaw 1, Delph 2, Diggle 1, Dobcross 1, Uppermill 2, Greenfield 2, and Friezland 2. At Royal George and Diggle arrangements are being made to replace the present schools, which are totally unsatisfactory.

In the Survey made by the Council, the Ventilation was found unsatisfactory in 6 schools; Lavatory and Drainage poor in 5 schools, and unsatisfactory in 4 other schools; the Cloak room accommodation was poor in 9 schools; and in 6 the playgrounds were poor.

The children are systematically examined by a School Medical Officer specially appointed by the West Riding County Council, and I, myself, inspect them from time to time.

MILK SUPPLY.

The subject of milk is a very delicate one with one or two of the farmers. This is only very natural, as they lead hard and anxious lives. As many of the farmers have conformed or are anxious to conform to the better sanitary measures required, it is not fair to them or to the general public that the few black sheep should be allowed to go on without some attempt at enlightenment. A few farmers cannot or will not see that they have all been treated with the most extreme consideration. They resent the slightest reference to the possibility of milk even being considered as a possible source of disease, notwithstanding the fact that it is one of the most perishable of foods, and one peculiarly suitable for the growth of microbes.

I do not consider it unfair to a farmer to preach the subject of cleanliness, inasmuch as a farmer who is particular must welcome all attempts to improve the general standard of safety as applied to milk, moreover any enforced action will strike particularly hard on these unfortunate people who have procrastinated all these years instead of gradually getting their farms and premises in a sanitary condition. In giving them this warning I feel to be doing them a real kindness, for the Higher Authorities will undoubtedly not allow the present policy of "letting things alone" to go on.

It was, therefore, with much concern that I learnt of the action of a medical man, who (probably thoughtlessly, if kindly) lectured to the farmers and preached the doctrine that milk was not only a better food in its raw condition, but was just as safe as if sterilized. He is quoted as saying, "A glass of milk from a cow with an affected udder might be drunk with safety by a healthy man, woman, or child." Such a statement leads to wrong impressions, and makes both the farmers and the general public believe that milk is not a factor in disease, and therefore implies that sanitary measures as applied to it are unnecessary; moreover, though flattering to the farmers, it makes all attempts to deal with the milk question very difficult, for it paralyses all efforts to combat and control disease, and makes any efforts of mine sound and look as if I were hostile to the farmers' interests.

My efforts to be fair in this matter should be obvious, e.g., in my last Report I said :—

"Milk is one of the most valuable and nutritious foods we have, and is, indeed, the main support of children. But childhood is the very time when mankind is most prone to suffer from infectious disease, and it is therefore on this account that the subject of milk demands our most serious attention. The qualities that make milk so nutritious to us are also those which make it so suitable for the growth of micro-organisms."

"Seeing then, that it is so liable to become contaminated by microbes, the questions arise : Is it a safe food to take ? Can it be kept pure and wholesome ? The answers to these questions may be given in the affirmative, provided the milk is clean and pure to start with. To ensure this, the farmer must have sound, healthy, and well-groomed cattle : he, himself, should be sound and scrupulously clean, whilst the vessels used in milking, as well as those used for storing the fluid, must have been cleansed and freshly scalded. The latter should also be provided with covers to keep out dust and flies, and the milk should be stored in a clean, dry place, away from the dwelling-part of the house, as it is most important that the milk should be kept cool. The importance of keeping milk covered and protected against dust and flies is extremely great; for the settling of dust in milk may be the agent in causing infectious disease, whilst flies have again and again been shewn to be capable of conveying germs to the milk, and in this way to cause Diarrhœa and Dysentery in the consumer."

" The importance of having sound, healthy cattle is not to be under-estimated, for unhealthy cattle may be the means of conveying Tuberculosis and Infectious Diseases to mankind.

We must then

(1) See that the milk is clean and pure on delivery.

(2) Provide against its being polluted in our own houses.

As we are not sure of these precautions having been carried out, I strongly urge the sterilization of milk. The question whether milk should be boiled or unboiled is not and cannot be a subject of controversy, for there is no doubt that milk is more nourishing in its natural condition; but under the unknown present circumstances, it is far better to lose a little of its nourishing properties and render it safe by sterilization; and this is all the more important, when we learn how very slightly the nutritional quality of milk is affected by such a process.

This method may be carried out in the following manner: place the vessel containing the milk in a pan, add water to the pan until it reaches about three-fourths the height of the milk in the vessel; after the water has boiled for 20 minutes, remove the vessel containing the milk to a cool place, and put a cover over it to keep away flies and dust.

COWSHED SANITATION.

Dr. Kaye, in his Saddleworth Survey, makes very strong remarks about the lack of duty in carrying out the Dairies, Cowsheds, and Milkshops Orders, which, though in force since 1906, have resulted in nothing but the registration of 100 Cowkeepers and Milk-sellers. You are one of the last Authorities in the West Riding to put them into force;

as things are, it is of course impossible for me to fill up the Tables sent by the County Council every year, e.g., you have no records of the conditions of the premises, the lighting, ventilation, or air space, or whether the cleansing, drainage, and water supply are adequate.

OTHER FOODS.

The 8 registered Bake-houses were found to be satisfactory.

SLAUGHTER-HOUSES.

In regard to slaughter-houses, Bye-laws have been in force since 1892. They are fifteen in number, and are all registered. That they are not in good sanitary condition, and do not conform with the Bye-laws, is obvious from the following remarks made by Dr. Kaye in his Saddleworth Survey :

" Of the 14 premises examined, only 5 complied with the requirements of the Public Health Acts as to notices which must be affixed to the premises and kept legible, stating whether they are " Registered " or " Licensed " slaughter-houses. It has been a recognised principle for half a century that this type of premises should not be situated near dwelling-houses, and the Local Government Board in 1877 pointed out that slaughter-houses and lairs in connection therewith should not be placed within 100 feet of any dwelling-house. In Saddleworth, four abut on dwelling-houses, two within 18 feet, four 30 feet, and one within 42 feet. One is in a confined place between a factory and another building, and only two are over 100 feet away from dwelling-houses. There should also be no loft or other premises over a slaughter-house and this condition is complied with except in two cases, in one a corn store being over the slaughter-house, and in the other, the retail sale room for the meat, which also communicates with the living room of the occupier.

" The floors of four premises are of cement concrete, and of one, strong stone slabs which are getting worn. The remainder are of flag-stones (some with cement joints, and some with soft joints) into which blood, etc., can penetrate. The walls, to be satisfactory, should be either rendered in cement to a height of 6 feet, or should be of glazed brick or other non-absorbent material ; they can thus be readily cleansed and kept in a sweet condition. Three premises are so constructed, the rest being of absorbent stone or brick limewashed, which being splashed with blood or other noxious matter, cannot be kept satisfactorily clean.

"As regards water, seven have the public supply laid on, the remainder being supplied from either springs or wells. No slaughter-house should have an opening into a drain from inside the building, but in Saddleworth eleven of those inspected had the gulley inside, the others being drained outside, in one case to a dishstone with a moveable bell trap.

"The Bye-laws require the removal of filth from the premises within 24 hours of slaughtering, but this does not appear to be carried out. Many of the butchers stated they removed the refuse weekly or every two weeks, while in some cases the District Council contract with them for its removal. The local Medical Officer of Health has for several years past pointed out the difficulty of getting rid of this kind of refuse satisfactorily All slaughter-houses should have receptacies of a non-absorbent material provided with close fitting covers for the temporary storage of organic matter. Half the premises were so provided, and of the remainder three were of galvanised iron without covers, and the rest had no proper receptacles. The stocks, tables, and other receptacles used in the slaughter-houses ought to be kept in a cleaner condition, since it was evident that some of the blood-stained stocks and benches were rarely, if ever, cleansed.

"There is need for the overhauling of the lairs connected with the slaughter-houses, so that the flooring, drainage, and cleansing of these places may be kept in a satisfactory condition. The surroundings also of some of these premises need improvement."

Dr. Kaye further recommends the provision of a public abattoir, as follows: "The necessity for providing suitable premises for the preparation of meat for human consumption has for a long time been advocated by all sanitarians. The provision of public abattoirs is highly desirable in order that adequate supervision may be given to ensure that only sound food is provided, and that diseased or unsound food may be readily seized (especially if of a tuberculous nature) and at once destroyed. It is exceedingly difficult for an Inspector in a large urban area to satisfactorily supervise the many premises which are allowed to be used as private slaughter-houses. Many of these premises are unsuitable in themselves, and others are situate amidst unsuitable surroundings. Often miles apart, it is difficult for the Inspector to get to all the premises while the process of slaughtering is being undertaken, and this is necessary for the inspection of the various offals before their removal from the premises; an inspection which affords valuable indications as to the condition of the animals at the time of slaughter. A public slaughter-house is therefore very desirable."

During the year I gave on three occasions my opinion regarding meat that was thought to be suspicious. Beyond condemning certain portions of the animal, it was not found necessary to take action.

OFFENSIVE TRADES.

Tripe-boiling is carried out on three premises, one in the cellar of a dwelling-house and the two others in connection with slaughter-houses. No recognised method is made in any of them to carry away the objectionable effluvia, nor are the walls or floors satisfactory. No Bye-laws exist whereby the requisite steps could be taken to prevent the organic effluvia from being a nuisance, and also to see that the premises and utensils are kept in a sanitary condition. It is therefore advisable that you at once take steps to adopt the necessary Bye-laws.

COMMON LODGING-HOUSES.

No Common Lodging-House is recognised as such in your district, though there is a house at Delph where lodgers are taken in, and which is inspected from time to time. Contrary to the statement made in the Survey, Bye-laws have been adopted in regard to Common Lodging-Houses since August, 1892.

HOUSING.

I regret to say that little or nothing has been done with regard to carrying out the Government Regulations under the Housing, Town Planning, &c., Act, 1909, and it is therefore impossible for me to give more than a brief account of the condition of the dwellings in your district. This has been rendered all the easier owing to the Saddleworth Survey made by Dr. Kaye for the West Riding County Council. He points out that the Registrar-General's standard of two occupants per room is exceeded in 80 cases; this means that 5·4 % of the families were living in an overcrowded state.

There are many old houses in the district; some are in very fair condition, whilst others have the faults peculiar to many old houses built in hilly districts, e.g.—

(*a*) They are built with their backs directly on to the earth, and are consequently damp.

(*b*) The rooms are often small, with deficient amount of light and incapable of proper ventilation, rendered all the worse by the almost impossibility of opening the necessary windows, or from being built back to back.

(*c*) The eaves-spouts are very frequently defective, so that the walls are kept constantly damp.

(*d*) The yards are generally badly paved.

(*e*) Such houses are often crowded together.

If the house is situated away from the various villages, we have further—

(*f*) A want of proper sewerage.

(*g*) Scavenging done by the occupants.

(*h*) Open privy middens, and often wet and foul.

(*i*) The necessity of drinking water from some private well, which may or may not be supplied by surface water.

Amongst the facts commented on by Dr. Kaye were the following:

1. Many houses continue to rely on the water from private wells instead of the public supply.
2. The scavenging was not satisfactorily done, and should be undertaken by the Council.
3. The Lodging-House at Delph is an obstructive building under the Building Acts.
4. The existence of a tenanted one-roomed cellar dwelling at Dobcross.
5. Attention required to houses situated in Uppermill.
6. The abolishment of the jars containing urine, that is so prevalent at Greenfield and Royal George.
7. The insanitary condition of Hey Top. (This I have already reported.)
8. The back-to-back houses.
9. Many yards required attention, notably Lees Yard, Uppermill.

"The Council have purchased land at four centres in the district, and are building in the first instance a small number of houses at each centre, leaving land available for further houses. The Urban Council offered prizes for model plans and have adopted two types, as below. They are erecting 10 houses of Type 1 at Delph and 10 at Harrop Edge Lane, while of Type 2 there will be 25 at Diggle and 10 at Uppermill.

Type 1. *Ground Floor*—Living room 14ft. 3in. x 13ft. 6in., scullery 11ft. 9in. x 11ft. 2in. *First Floor*—Two bedrooms 14ft. x 14ft. and 10ft. x 9ft. *Second Floor*—An attic bedroom 17ft. 6in. x 14ft. 3in., which can be divided to make two rooms. A bath and w.c. are provided for each house. Rent, 5/- per week.

Type 2. *Ground Floor*—Living room 14ft. 3in. x 14ft., scullery 11ft. 3in. x 10ft. 3in. *First Floor*—Two bedrooms 14ft. x 14ft. and 10ft. x 9ft. *Second Floor*—An attic bedroom 15ft. x 15ft., which can be divided to make two rooms. Each house has a bath and slop-water closet. Rent, 5/- per week."

In my last Report I said :

"The group of houses at Sodom, Delph, is dangerous of access, on account of the danger of the approach, which is by a narrow path around a mill dam. This approach has caused, and will cause, many accidents and even deaths, and should be made safe. Apart from this, there are buildings which are tumbling down, and which would be positively dangerous except that they are boarded off. The yard is dirty and undrained, and in wet weather is one vast puddle; moreover, the houses themselves are low-lying and damp, and their backs adjoin an ashpit on which vegetable refuse is constantly being thrown. The whole site is in every way an eye-sore and a blot on Delph, and something should be done to alter it." I am sorry to say that little or nothing has been done.

The number of new houses erected was 9; they are all cottages in type, and were constructed in conformity with the bye-laws.

WORKSHOPS.

The number of Workshops registered in your district is 14, including 8 Bakehouses. There are no underground Bakehouses. There are 10 Factories, but no Domestic Factories. All the Workshops, and most of the Factories have been inspected, 3 of the latter received written notices of nuisances, etc., but no legal proceedings have been taken. The Lists of Outworkers received are 20 in number, representing 10 employers, and 101 outworkers. No action has resulted from an outworker having infected premises.

SANITARY ADMINISTRATION OF THE DISTRICT.

The SANITARY STAFF consists of the Inspector of Nuisances and myself. The Sanitary Officer is also the manager of the various Outfall Works and Inspector of Canal Boats; in addition he holds the appointment of Building Surveyor. There is no doubt that the Sanitary Inspector has too many offices, and that if the inspection of the district is to be properly carried out you will require more help. This is no reflection on Mr. Ashworth, who has proved a most able and willing officer.

ISOLATION HOSPITAL FOR INFECTIOUS DISEASES.

Although we have no Hospital in our own district for the Isolation and Treatment of cases of Infectious Disease, yet arrangements exist, whereby we can (at the expense of the patient), use those belonging to the Oldham Corporation. This applies to their Smallpox Hospital and their Fever Hospital. It is true that a building exists at Runninghill which was formerly used for cases of Smallpox, also that fires are lighted there twice a week; but the beds and bedding are in such a condition that both would require renewal if, by any chance, we should be again obliged to use it as a Smallpox Hospital.

In his Survey, Dr. Kaye says: "A Conjoint Hospital with Springhead, of a size suitable for the area, is needed. During the last ten years (1903-1912), 749 cases were notified, and only 11 (Smallpox) were treated in Hospital."

A reference to my remarks on Scarlet Fever should indicate the necessity for such a Hospital, for it is and has been a need for some time, moreover I have advocated its necessity for many years.

SMALLPOX VAN.

The Smallpox Van should receive attention from time to time, as you never know when it may be required.

ADOPTIVE ACTS.

On April 9th, 1900, when the Rural Sanitary District of Saddleworth was amalgamated with the Uppermill Local Board to form the present Urban Sanitary District of Saddleworth, the "Order of Amalgamation" made the following Adoptive Acts in force, viz.:

1. The Infectious Diseases (Notification) Act, 1889.
2. The Infectious Diseases (Prevention) Act, 1890.
3. Parts II. and III. of the Public Health Acts (Amendment) Act, 1890, of which Part II. is concerned with Sanitary matters.

4. The Private Street Works Act, 1892.

On July 30th, 1908, the Public Health Acts (Amendment) Act, 1907, Parts II., III., IV. (except § 6 and 7), and V. were adopted. As § 67 provides for nursing attendance by the Local Authority to persons suffering from infectious disease, it should (as advised by Dr. Kaye) be adopted.

BYE-LAWS.

The following Bye-laws are in force, and relate to—

1. Private Scavenging	- adopted	September 15th, 1911.
2. Prevention of Nuisances	,,	July 31st, 1911.
3. Common Lodging Houses	,,	August 11th, 1892.
4. New Streets and Buildings	,,	March 27th, 1911.
5. Cleaning of Footways and Pavements	,,	March 27th, 1911.
6. Slaughter houses	,,	August 11th, 1892.
7. Regulations under Dairies, Cowsheds, and Milkshops Order	,,	October 1st, 1906.

It is to be regretted that no Bye-laws have been adopted to deal with Offensive Trades.

FACTORY AND WORKSHOP ACT, 1901.

This Act came into force on January 1st, 1902, and whilst repealing all the existing Factory and Workshop Acts, it consolidates, with numerous amendments, the provisions they contain.

It provides, amongst other things, for

1. The cleanliness, ventilation, overcrowding, and sanitary condition of all Factories and Workshops, and gives more power to the District Council and their officers to enforce these conditions.

2. The safety of the workers. For example:

(*a*) By the fencing of machinery,
(*b*) By the provisions of means of escape in case of fire.

[Every District Council shall have power to make bye-laws providing for means of escape from fire in the case of any Factory or Workshop; to which bye-laws § 182 to 186 of the Public Health Act, 1875, shall apply.]

3. The notification to His Majesty's Chief Inspector of Factories by any medical practitioner of any case of

   (*a*) Lead, phosphorus, arsenic, or mercurial poisoning:
   (*b*) Anthrax, or woolsorters' disease.

4. The sanitary condition of Bakehouses, and their maintenance in such a condition, as for example, by periodical lime-washing, etc.

5. The sanitary condition of Laundries, and their maintenance therein.

6. Work done at people's homes.

The Secretary of State has issued special instructions to the Councils, regarding the enforcement by them and their officers, of the provisions in the Factory Act, which deals with the subject of home-work. These provisions (contained in §§ 107 to 114 of the Act) will be found summarized in the memorandum on the duties of local authorities, under the Factory Act which was issued to the Council, in December, 1904—

> The Secretary of State would most earnestly press upon the Council the importance, in the interests of the large class of workers engaged in home work, of a thorough administration of those provisions. Outworkers form the weakest section of the labouring class, and the class in respect of which the State from the nature of the circumstances is least able by its Officers to control the conditions of work. If these conditions are to be effectively controlled, the local authorities, to whom Parliament has entrusted the duty of supervising them, must make a full use of their powers. Tue Secretary of State may remind the Council that in addition to the ordinary sanitary inspection under the Public Health Act of outworkers' dwellings, which is even more necessary in their case than in the case of ordinary dwellings, the following special obligations are placed on the Council:—

1. The lists of outworkers should be duly received by the Council from employers, twice a year, viz.: on the 1st of February and 1st of August; if neglected, steps should be taken to enforce them.

   (*a*) No name should be entered on the list, of any outworker who has not worked within the last 6 months.

2. The addresses of any outworkers in the lists, who reside in other districts, should be communicated to the Councils of those districts.

3. To prohibit (by making an Order) work being done
(*a*) where the premises are unwholesome,
(*b*) where any inmate of the premises suffers from Scarlet Fever, Smallpox, or any infectious disease.

HOUSING, TOWN PLANNING, ETC., ACT, 1909.

The Government Regulations, made under the Housing, Town Planning, etc., Act, 1909, render it the duty of you, as a Sanitary Authority, to arrange for the systematic inspection of the houses in your district, so that the result of such systematic and special house inspection may be regularly brought before your notice. It is true that a great many houses are examined and inspected yearly, but this has not yet been done in accordance with the Regulations of the Act mentioned, and it is therefore incumbent on you to see that this Act is carried out.

PREVALENCE OF AND CONTROL OVER ACUTE INFECTIOUS DISEASES.

The number of Infectious Diseases notified during the year were 201. Their tabulation is as follows: Diphtheria, 49: Scarlet Fever, 104; Enteric Fever, 1; Erysipelas, 6: Puerperal Fever, 1; Phthisis, 31, and Other Tubercular Diseases, 9.

The following tables show the numbers of infectious cases, arranged (1) in districts, and (2) in months:

TOTALS OF REPORTED CASES ARRANGED IN DISTRICTS.

	Denshaw & Slackcote	Delph.	Dobcross & Woolroad	Diggle.	Uppermill	Greenfield	Roy.George & Grascroft	Total.
Smallpox	0	0	0	0	0	0	0	0
Diphtheria & Croup	0	21	2	3	13	8	1	49
Erysipelas...............	0	4	1	0	0	1	0	6
Scarlet Fever	3	3	8	3	18	51	19	105
Enteric Fever	0	0	1	0	0	0	0	1
Phthisis..................	1	10	5	3	7	5	0	31
OtherTuberc'l'r dise's	0	3	2	0	0	2	2	9
Puerperal Fever	0	0	0	0	0	1	0	1

MONTHLY TOTALS OF REPORTED CASES.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Smallpox	0	0	0	0	0	0	0	0	0	0	0	0	0
Diphtheria & Croup	7	5	4	4	2	2	3	1	2	3	13	3	49
Erysipelas	0	0	1	1	0	0	0	0	0	1	3	0	6
Scarlet Fever	13	7	14	18	19	21	5	3	4	1	1	0	105
Enteric Fever.........	0	0	1	0	0	0	0	0	0	0	0	0	1
Phthisis	0	3	3	0	0	2	4	0	2	3	10	4	31
OtherTuber'l'r dise's	0	3	2	2	0	0	0	1	0	0	1	0	9
Measles	0	many	many	many	0	0	0	0	0	0	a few	a few	many
Whooping Cough ...	0	0	0	0	0	0	0	0	0	0	0	1	several
Puerperal Fever......	0	0	0	0	1	0	0	0	0	0	0	0	1

SCARLET FEVER.

The notifications of this disease were distributed in the various districts as follows: Few cases occurred in the districts of Denshaw, Delph, Dobcross, and Diggle, compared with the numbers in the rest of the district, where they were as follows: Uppermill, 18; Greenfield, 51; and Royal George and Grasscroft, 19. The chief feature of the epidemic in Greenfield was the occurrence of 16 cases in a back-to-back block of houses situated at Hey Top. I made a house-to-house examination of this property, and reported specially on the matter: advising amongst other things that, if possible, the houses be made through houses, and in any case, steps be taken to drain the land near, as well as giving attention to the house drains and untrapped sink pipes. This was particularly advocated on account of the immense number of flies that infest the neighbourhood of this property. All efforts to get these defects remedied have so far proved useless.

One of the cases at Uppermill occurred in an under-dwelling of two rooms on the same level, where in addition to the family of the man, wife, and two children, was a female lodger with one child. It was obviously over-crowded, and steps were taken which resulted in the lodger going.

With regard to the epidemic at Greenfield, every step was taken to check it, e.g.—I caused the St. Mary's School to be closed for a month, visited the cases, and insisted on isolation and disinfection of the various houses. The isolation was difficult, and indeed almost impossible to properly effect.

The need for an Isolation Hospital is well shown in this epidemic, for there were—

6 in one house on 1 occasion;
4 in one house on 3 occasions;
3 in one house on 7 occasions;
2 in one house on 11 occasions.

Thus 65 cases were distributed in 24 families, the remaining 40 occurring in the like number of families. In other words, had only each house had one case, there would have been only 64 as against 105 notified, i.e.—there would have been only about half the amount of sickness from this disease. This must strike you as a very serious matter, particularly when you reflect how totally impossible it is to cope with an infectious disease with the ordinary house accommodation.

It is true that only 3 deaths were recorded, but who can estimate the amount of injury that has been done, seeing that it may not be evident till later on in life; and then some doctor will ask some of these children who will then be men and women, such a question as: "Have you ever had Scarlet Fever?"; meaning that their attack of Heart Disease or Bright's Disease was directly traceable to this epidemic.

DIPHTHERIA.

Diphtheria has been more or less present throughout the year. Of the 49 cases notified, 21 occurred in the lower parts of the district, viz.—Uppermill, 13; Greenfield, 8; and Royal George, 1. The remaining cases were distributed as follows:— Denshaw, 1; Delph, 21; Dobcross, 2; and Diggle, 3. These portions of Saddleworth as a rule keep fairly free from the disease, but during the last year you will note that for Delph 21 notifications were received, their distribution in months being July, 3; August, 1; September, 2; October, 1; November, 12; and December, 2.

All these cases were visited and the premises inspected, with the results that:—in 4, defective sanitary conditions were found, which have since been abated; near one group of houses, a well was found that had its source liable to contamination by the presence of a small tip, this has also been remedied. The premises of the farmers supplying the milk were also inspected, and could not be considered to be all that was desirable, either in air space, ventilation, or drainage. An inspection of the school at which most of the children attended did not reveal anything of an insanitary nature. My conclusion was that there was some undiscovered sources of infection in some of the children, a source that could not be ascertained without the systematic swabbing out of all the children's throats, and subsequent examination of the swab for the Diphtheria Microbe. This might be advisable in any future epidemics.

The diagnosis of the disease was made, in nearly all the cases that were reported, by bacteriological examination, and proved invaluable.

The deaths were four in number, and would without doubt have been many more but for the early use of the Diphtheria Antitoxin. Many people are still remiss in sending for skilled assistance when they know that a child is suffering from a sore-throat, and thus increase the danger to the child's life twenty-fold.

DIPHTHERITIC ANTITOXIN.

This was used in the great majority of the cases, and, as usual, proved of immense value. Arrangements are still in force whereby a supply of the Antitoxin can be supplied gratuitously in necessitous cases.

ERYSIPELAS.

Erysipelas was notified on 6 occasions, viz.—at Delph 4, at Dobcross 1, and at Greenfield 1. Four of the cases were reported during October and November. Sanitary defects were found in two instances, which have since been remedied.

ENTERIC FEVER.

Typhoid Fever was responsible for one notification at Dobcross, in March. It was attributed to bad drains at the house where the patient had been visiting; at all events nothing of an insanitary nature was discoverable in the patient's home.

MEASLES.

Measles was, comparatively speaking, uncommon. During November there were cases in Uppermill, but at no time could it be said to have been prevalent. It was responsible for two deaths.

WHOOPING COUGH.

This disease has occurred sporadically from time to time, particularly in Uppermill and Greenfield. Towards the latter part of the year it became more prevalent, but not to a large extent.

PUERPERAL FEVER.

This disease was notified on one occasion at Greenfield, and was caused by Scarlet Fever, to which the patient had been exposed. It unfortunately ended in death. Nothing of an insanitary nature was discovered.

TUBERCULOSIS.

This disease is notifiable under two headings, dependent on the portion of the body affected. If the lungs are affected it is Phthisis, elsewhere it is classified under "Other Tubercular Diseases." Phthisis, or Consumption, was notified 31 times, and was divided amongst the districts as follows: Denshaw, 1; Delph, 10; Dobcross, 5; Diggle, 1; Uppermill, 7; and Greenfield, 5. Other Tubercular Diseases had the following distribution: Delph, 3; Dobcross, 2; Greenfield, 2; and Royal George, 2.

It is difficult to properly interpret these figures. On the surface it would appear that there had been a large increase in disease due to the tubercle bacillus, but this conclusion is scarcely warranted, for the year 1912 is the first year when notification of the disease has been really and efficiently carried out, and moreover, the deaths are no more than the number that occurred in 1912. For the first time in history, a real attempt is being made to cope with the disease; and with this object everyone is alive to the necessity of recognizing it in the early stages, at a time when it is more susceptible to treatment. The provision of a special Tuberculous Officer, and the comparative ease with which cases can have Sanatorium treatment, are most important steps towards the treatment, the isolation, and the stamping out of this scourge.

MEANS FOR PREVENTING MORTALITY IN CHILDBIRTH AND IN INFANCY.

Midwives.—There are several excellent midwives in the district, clean and trustworthy in the best sense, but there are also a few who would be better employed in other work, as they are a constant source of anxiety to a doctor, inasmuch as he has to make up for their deficiencies in the ways of knowledge and training,

Infants.—The Notification of Births Act, 1907, was not adopted, but this is now compulsory, mainly with the idea of the lessening of Infant Mortality by the encouragement of "breast feeding."

BACTERIOLOGICAL AIDS.

The aid given by the Public Health Laboratory, under the charge of Dr. Kaye, has again proved of signal service, particularly in suspected cases of Typhoid Fever, Diphtheria, and Tuberculosis.

DISINFECTION.

In all cases of Notifiable Disease, the premises are disinfected by a portable spray in which a 40 per cent. solution of Formaldehyde is used. This has proved invaluable.

There is still no efficient way of stoving the clothing. I would again point out that if a Destructor were purchased, the surplus steam could be used to work a Disinfector, in which clothing could be properly stoved.

Arrangements exist whereby disinfectants can be obtained gratuitously.

VACCINATION.

Vaccination is almost the exception than the rule in your District, particularly since 1908. For the years 1906-1910 only 52 per cent. were vaccinated, as against 66·1 in the West Riding, and 64·8 in England and Wales. This is a deplorable fact, and it is to be earnestly hoped that there will be no visitation by Smallpox, as it is hard to see the innocent suffer through the misguided ideas of those responsible for them.

BIRTHS.

The number of births registered during the year was 238, of which 122 were males and 116 females. The natural increase of population, represented by the excess of births over deaths, was 63. As regards still-births, I have no available information. There were 4 illegitimate births, all being boys.

BIRTH-RATE.

The estimated BIRTH-RATE is 19·1 per 1,000 inhabitants. During the last 5 years it was as follows :

1909	1910	1911	1912	1913
20·61	19·9	18·7	19·2	19·1

INFANTILE MORTALITY.

Of the 238 children born, 25 died under the age of one year, as against 8 in 1912, and 23 in 1911. This means that 105 out of every 1,000 born, died under the age of one year, or in other words, out of every ten children born, one died before it was a year old.

DEATHS.

The deaths registered during the year were 175 in number. Of these, 93 were males and 82 females. There was one death amongst the illegitimate children under a year old.

DEATH-RATE.

The DEATH-RATE is estimated at 13·8 per 1,000 inhabitants. The comparison with previous years reads as follows :

1909	1910	1911	1912	1913
18·02	12·6	15·4	12·8	13·8

The number of deaths classified according to AGE are

Under 1 year	25
Between 1 year and 2	6
,, 2 ,, 5	6
,, 5 ,, 15	9
,, 15 ,, 25	6
,, 25 ,, 45	13
,, 45 ,, 65	43
Over 65	67

TABULATED according to the CAUSE OF DEATH the numbers are :

	1911.	1912.	1913.
Typhoid Fever	3	0	0
Smallpox	0	0	0
Measles	1	0	2
Scarlet Fever	0	1	3
Whooping Cough	4	1	1
Diphtheria and Croup	0	2	4
Erysipelas	0	0	0
Phthisis	7	10	9
Tuberculous Meningitis	0	1	2
Other Tuberculous Diseases	4	2	3
Rheumatic Fever	0	0	2
Heart Disease	?	21	21
Meningitis	0	2	2
Cancer, Malignant Disease	14	11	17
Bronchitis	11	9	14
Pneumonia (all forms)	14	19	13
Other Diseases of Respiratory Organs	4	1	1
Diarrhœa and Enteritis	6	0	0
Appendicitis	2	0	1
Alcoholism	2	1	2
Cirrhosis of Liver	2	1	1
Nephritis and Brights' Disease	11	13	12
Puerperal Fever	0	0	1
Diseases and Accidents of Parturition	1	1	1
Congenital Debility, etc.	9	3	11
Suicides	1	0	1
Other Violent Deaths	8	2	4
Uncertified	1	0	0
All Other Diseases	89	58	47

The deaths from the seven principal Zymotic Diseases were 10 in number, giving a Zymotic Death-rate of 0·8 per 1,000. For comparison I give the Zymotic Death-rates for the past 6 years:

1908	1909	1910	1911	1912	1913
0·32	1·3	0·4	0·62	0·31	0·8

The following table is given for the purpose of comparing the various Death-rates per 1,000 of the seven Principal Zymotic Diseases:

	Small-pox.	Measles.	Scarlet Fever.	Diphtheria & Croup	Whooping Cough.	Fevers and Typhoid	Zymotic Diarrhœa.
1908.........	...	0·08	...	0·16	0·08	...	...
1909.........	...	0·72	0·08	0·4	0·08	...	...
1910.........	...	...	...	0·16	0·24	...	...
1911.........	...	0·08	...	...	0·32	0·24	...
1912.........	...	...	0·08	0·16	0·08	...	...
1913.........	...	0·16	0·24	0·32	0.08	...	...

The following is a table showing the number of deaths from zymotic diseases during the last 6 years:

	Small-pox.	Measles.	Scarlet Fever.	Diphtheria & Croup.	Whooping Cough.	Fevers and Typhoid	Zymotic Diarrhœa.	Total.
1908	...	1	...	2	1	...	...	4
1909	...	9	1	5	1	...	...	16
1910	...	...	...	2	3	...	...	5
1911	...	1	...	...	4	3	...	8
1912	...	...	1	2	1	...	...	4
1913	...	2	3	4	1	...	...	10

Zymotic Disease.	No. of Cases, 1912.	No. of Deaths, 1912.	Ratio of Deaths.	
			(a) per 1,000 persons attacked.	(b) per 1,000 persons living.
Smallpox	Nil	nil	nil	nil
Scarlet Fever	104	3	28·8	0·24
Diphtheria & Croup	49	2	81·6	0·16
Enteric Fever	1	nil	nil	nil
Measles	many	2	?	0·16
Whooping Cough ...	not notified	1	?	0·08
Diarrhœa & Enteritis	few, if any	nil	?	nil
Total of chief Zymotic Diseases	?	8	?	0·31

Age Distribution of Infant Deaths.	No. of Deaths.		Ratio per 1,000 Births.	
	1912	1913	1912	1913
Under 1 week	4	5	16	21
1 to 2 weeks	0	0	4	12·6
2 to 3 weeks	1	3		
3 to 4 weeks	0	0		
Total under 1 month ...	5	8	20	33·6
1 to 3 months	0	10	0	42
Total under 3 months ...	5	18	20	75
3 to 6 months	1	1	4	4
6 to 9 months	2	3	8	12·6
9 to 12 months	0	3	0	12·6
Total under 12 months...	8	25	33	105

The deaths from Bronchitis, Pneumonia, and Pleurisy were 27 in number, giving a RESPIRATORY DEATH-RATE of 2.2 per 1,000. During the past 5 years it was as follows:

1909	1910	1911	1912	1913
2·35	1·5	2·3	2·2	2·2

There were 9 deaths from Phthisis, and 3 from "Other Tubercular Diseases." The PHTHISICAL DEATH-RATE is 0·72. These figures are about the same as those of 1912.

Cancer was responsible for 17 deaths, a Death-rate of 1·34, compared with 0·8 for the previous year, and 1·1 for 1910, and 1 2 for 1909. This disease has caused a heavier mortality than I have record of.

INFANT MORTALITY.

This, as has already been stated, is 105 per 1,000 children born, and is much heavier than the figures for 1912, but not very different from those of the previous four years.

The 25 deaths in children under one year of age, with the cause of death, is as follow:

	Under one month.	Between 1 & 3 months.	Between 3 & 12 months.	Total.
Measles	0	0	1	1
Tuberculous Meningitis	0	0	1	1
Abdominal Tuberculosis	0	0	1	1
Meningitis	0	1	1	2
Convulsions	0	1	0	1
Bronchitis	0	2	0	2
Pneumonia	0	2	2	4
Suffocation (over lying)	0	1	0	1
Injury at birth	0	1	0	1
Congenital Malformations.	4	0	0	4
Premature Birth	3	0	0	3
Debility	1	2	0	3
Other Causes	0	0	1	1
	8	10	7	25

The number of deaths of children under one year of age during the last six years is as follows:

1908	1909	1910	1911	1912	1913
29	31	21	23	8	25

The following table gives a comparison, between the figures for England and Wales (with the deduction of the figures for the towns) and those of your district :

	England & Wales, less the Towns.				*U. S. D. of Saddleworth.*		
	1911.	1912.	1913.		1911.	1912.	1913.
	—	—	—		—	—	—
Birth-rate	23·4	22·5	22·3	...	18·7	19·2	19·1
Death-rate	13·9	12·9	13·1	...	15·4	12·8	13·8
Zymotic Death-rate	1·4	0·9	0·8	...	0·62	0·3	0·8
Infantile Mortality..	118	86	96	...	97 4	33	105

From these figures it will be seen that the Birth-rate is only 19·1 compared with 22·3 per 1,000 in England and Wales. The Birth-rate is about the same as in the previous year, and means that 44 fewer children were born than would make Saddleworth equal to the low rate of England and Wales.

The Death-rate is not very different from that of England and Wales, and the same can be said for the Zymotic Death-rate. The number of deaths amongst children under one year of age is more than occurred in 1912, but not very different from the numbers for the previous four years.

The chief features of the year were the epidemics of Scarlet Fever and Diphtheria, and the increased mortality from Cancer.

Some remarks have been made comparing the incidence of Infectious Diseases in Saddleworth with that of Springhead ; this, of course, was the result of the Survey of the two districts having been taken together. A little reflection will, however, convince you of the impossibility of drawing any fair deductions in favour of either the one or the other. Springhead has a much smaller population, is situated in a different drainage area, viz., the River Medlock, and is mainly a cotton-manufacturing district ; Saddleworth has about 2½ times the population, is in the drainage area of the River Tame, and is mainly concerned with Woollen Manufactures and Agriculture, moreover, the more populous parts are situated on the banks of the river, which is by no means the case with Springhead.

During the year, Dr. Kaye issued an invaluable Sanitary Survey of your district, in which he particularly comments on the condition of the houses, schools, milk-shops, and slaughter-houses. His more minute enquiry into these matters has lead him into the following list of suggestions and requirements, which do not greatly differ from those which I have from time to time pointed out. In this list he mentions the need for—

(1) An Isolation Hospital.

(2) The efficient administration of Acts and Bye-laws already adopted ; e.g.—

  (*a*) The Housing and Town Planning Act, 1909. (especially § 15 to 18.)

  (*b*) The Housing (Inspection of Districts) Regulations, 1910.

  (*c*) The Dairies, Cowsheds & Milkshops Orders.

  (*d*) The Bye-laws relating to Slaughter-houses.

(3) The adoption of Bye-laws relating to Offensive Trades.

(4) The adoption of public Scavenging by the Council with their own staff and horses.

(5) A Destructor, or more Tips.

(6) New houses being prohibited from having pails and privy-middens except where there is no adequate water supply or public sewers.

(7) A better water supply to various groups of houses.

(8) The extension of sewers to Harrop Green and Diglee.

(9) The abolition of the Greenfield and Uppermill Sewage Works, with the coupling up of the sewers to the Royal George Works, which should be enlarged and improved on modern lines.

(10) A Public Abattoir or Slaughter-house.

To these I would add—

The immediate need for attention to the road going from Diggle Station to Harrop Court.

In conclusion, I append a copy of the Meteorological Report, as well as that of the Inspector of Nuisances.

I remain,
Yours faithfully,
HERBERT RAMSDEN.

ANNUAL REPORT OF

INSPECTOR OF NUISANCES

FOR YEAR ENDING 1913.

To the Chairman and Members of the Urban District of Saddleworth.

GENTLEMEN,

During the course of inspection throughout the past year of the various premises within the district, many nuisances have been discovered, dealt with, and abated, in accordance with the Public Health Acts and Byelaws.

The number of informal notices served during the year in respect to nuisances and defective Sanitary arrangements, is 123. Many of the notices were complied with within a reasonable time after service of notice, but in 9 cases it was found necessary to serve legal notices for the abatement thereof. The following table gives a summary of the general nuisances which have received attention :

	Unabated. 1912.	*Notified.* 1913.	*Abated.* 1913.	*Unabated.* 1913.
Accumulation of Ashes and Offensive Matter	...	2	3	...
Privies and Ashpits requiring emptying, etc	...	12	12	...
Defective Drainage	...	41	10	31
Insufficient Closet Accommodation	...	2	2	...
Number of Closets ordered to be erected	...	2	2	...
Closets converted to Water Carriage and Pail System ...	...	51	25	26
Defective Ashpits	...	34	14	20
Dustbins ordered	...	50	39	11
Filthy Matter lying exposed	...	1	1	...
Waste Pipes disconnected and trapped	...	10	10	...
Defective Sanitary Pails	...	40	40	...
Blocked Closets	...	20	20	...
Blocked Drains	...	30	30	...
TOTAL	...	295	208	88

SMOKE OBSERVATIONS.

The observations of smoke emitted from mill chimneys within the district are 12 in number, and the number of cases where the limit of eight minutes allowed for black smoke per hour was exceeded is one, given below :

	Black.	Moderate	None.
Astbury & Pickford, Lumb Mill, Delph	30½	29½	0

Against whom proceedings were taken.

Slaughter-Houses.

The premises licensed by the Council for slaughtering cattle and other animals are 15.

Offensive Trades.

The premises used for tripe-boiling have been inspected several times during the year and limewashing has been regularly carried out.

Dairies, Cowsheds, and Milkshops Orders.

Attention is now being given to the Dairies and Cowsheds Orders, and the regulations made thereunder. One hundred applications have been made for registration, and these have been granted certificates.

Infectious Diseases.

The number of cases of infectious disease which have been investigated and reported upon during the year is 172, being an increase of 111 cases over the previous year's record. Of this number there were—Scarlet Fever, 95 ; Diphtheria, 43 ; Erysipelas, 6 ; Enteric, 1 ; Phthisis, 27.

Disinfectants : Izal and Camphorine were freely supplied in each case.

Disinfection.

Disinfection has been carried out at every house where notifiable disease has occurred ; 114 houses representing 383 living and bedrooms have been dealt with.

Common Lodging Houses.

There are no Common Lodging Houses within the district, although there is a place in Delph where weekly lodgers are taken in ; this place is under continual inspection.

Plans Approved for various Works.

Thirty-four plans have been approved for various works in the district, comprising 9 dwelling-houses which have been erected, the remainder are relating to various works. In addition to the number of houses erected, there are 55 houses which have been erected under the Council's Housing Scheme.

I am,
Yours obediently,
ARNOLD ASHWORTH.

METEOROLOGICAL REPORT. I am much indebted to Chas. J. Batley, Esq., Assoc. M. Inst., C.E., and Resident Engineer at Piethorn, for the following Meteorological Report.

OLDHAM CORPORATION WATER WORKS.

GAUGE, 875 FEET 6 INCHES ABOVE SEA-LEVEL.

RAINFALL AT CASTLESHAW, "BROADHEAD," FOR YEAR ENDING 1913.

DATE, 1912.	RAINFALL.	Greatest Fall in 24 hours.		No. of days on which rain fell.
	Inches.	Date.	Inches.	
January	3·64	4	·64	23
February ...	1·30	9	·27	15
March	4·91	22	·57	27
April	4·36	15	·67	19
May...........	2·84	6	·58	20
June	3·30	23	·77	14
July	1·36	6	·33	15
August	2·60	22	·80	11
September ...	1·81	17	·57	17
October	2·84	7	·65	18
November ...	4·66	20	·54	28
December ...	3·07	26	·67	20
	36·69			227

CHAS. J. BATLEY, *Engineer.*

Piethorne, near Rochdale.

OLDHAM CORPORATION WATER WORKS. RAINFALL AT CASTLESHAW "BROADHEAD."

Gauge, 875 feet, 6 Inches above Sea-level.

	1887	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
January ...	1·58	4·86	2·16	2·61	3·87	3·96	2·21	5·06	1·69	3·33	2·74	5·24	1.53	3·77	3·64
February....	1·01	3·79	1·63	1·19	4·07	3·52	2·04	3·54	2·31	3·25	2·14	4·21	4·71	2·00	1·30
March	1·78	·91	2·98	2·28	5·57	2·29	3·86	3·72	3·30	3·20	3·41	·86	2·11	5·23	4·91
April	1·62	2·60	2·71	1·83	2·23	2·88	3·15	2·01	2·80	2·13	3·85	3·81	2·90	1.27	4·36
May	2·18	1·38	1·44	3·04	3·39	3·67	·57	3·93	4·08	2·64	2·31	3·06	1·38	3·92	2·84
June.........	·47	5·96	1·87	1·29	1·51	·92	2·90	1·51	7·23	2·52	2·85	4·82	3·53	4·59	3·30
July	2·02	3·54	3·13	2·74	4·03	1·48	2·29	2·35	3·18	5·30	6·62	5·01	·66	5·38	1·36
August......	1·69	5·50	2·34	3·60	5·17	4·41	4·65	3·80	4·02	4·34	3·24	5·23	2·96	7·27	2·60
September..	5·30	1·58	·80	2·47	5·80	1·76	3·31	1·44	·96	4·01	2·84	0·27	3·87	1·99	1·81
October ...	3·63	5·84	3·64	5·07	9·29	1·74	3·87	7·59	6·58	1·50	6·32	3·51	3·42	4·93	2·84
November...	2·53	3·53	6·11	1·78	3·61	3·52	5·22	4·43	3·23	2·27	1·65	4·58	5·51	3·70	4·66
December...	2·83	5·61	5·16	3·50	2·35	3·36	·95	3·87	4·52	3·16	7·27	4·48	5·91	6·25	3·07
	26·64	45·10	33·97	31·40	50·89	33·51	35·02	43·25	43·90	37.75	45·24	45·08	38·49	50·30	36·69